

Evaluation of Soybean Varieties Resistant to Soybean Cyst Nematode in Iowa in 2003

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Introduction

Use of resistant soybean varieties is a very effective strategy for managing soybean cyst nematode (SCN), and numerous SCN-resistant soybean varieties are available for Iowa soybean growers. Each year, public and private SCN-resistant soybean varieties are evaluated in SCN-infested fields throughout Iowa by Iowa State University personnel. The research described in this report was performed to assess the agronomic performance of maturity group (MG) I, II, and III SCN-resistant soybean varieties and to determine the effects of the varieties on SCN numbers or population densities.

Materials and Methods

In the northern Iowa district, eight conventional and 48 Roundup Ready[®], SCN-resistant soybean varieties were evaluated in SCN-infested fields near Sutherland (northwest Iowa), near Kanawha (north central Iowa), and near Sumner (northeast Iowa). Three conventional and four Roundup Ready[®], SCN-susceptible varieties also were planted in the experiments. Plots were four 17-foot-long rows spaced 30 inches apart and were planted at a rate of 10 seeds per foot, with four replications per variety. Preplant herbicide was applied to each location. Conventional post-emergent herbicides were applied to the conventional varieties and Roundup[®] herbicide was applied to the Roundup Ready[®] varieties. Insecticide was applied for soybean aphid control at the Sumner site. The site near Sutherland was planted on May 21st and harvested on October 6th, the site near Kanawha was planted on May 17th and harvested on October 1st, and the site near Sumner was planted on May 18th and harvested on October 2nd.

In the central Iowa district, nine conventional and 41 Roundup Ready[®], SCN-resistant soybean varieties were evaluated in SCN-infested fields near Churdan (west central Iowa), near Ames (central Iowa), and near Stanwood (east central Iowa). Four conventional and four Roundup Ready[®], SCN-susceptible varieties also were planted in the experiments. Plots were four 17-foot-long rows spaced 30 inches apart and were planted at a rate of 10 seeds per foot, with four replications per variety. Preplant herbicide was applied to each location. Conventional post-emergent herbicides were applied to the conventional varieties and Roundup[®] herbicide was applied to the Roundup Ready[®] varieties. Insecticide was applied for soybean aphid control at all three sites. The site near Churdan was planted on May 22nd and harvested on October 7th, the site near Ames was planted on May 20th and harvested on October 4th, and the site near Stanwood was planted on May 18th and harvested on October 8th.

In the southern Iowa district, 41 Roundup Ready[®], SCN-resistant soybean varieties were evaluated in SCN-infested fields near Lenox (southwest Iowa), near Melrose (south central Iowa), and near Crawfordsville (southeast Iowa). Four Roundup Ready[®], SCN-susceptible varieties also were planted in the experiments. Plots were four 17-foot-long rows spaced 30 inches apart and were planted at a rate of 10 seeds per foot, with four replications per variety. Preplant herbicide and Roundup[®] herbicide were applied to each location. Insecticide was applied for aphid control at the Melrose and Crawfordsville sites. The site near Lenox was planted on May 13th and harvested on October 10th, the site near Melrose was planted on May 23rd and harvested on October 10th, and the site near Crawfordsville was planted on May 19th and harvested on October 9th.

Plant stand (number of plants per foot) was assessed in each plot 35 to 40 days after planting. All plots were end trimmed to a length of 14 feet during the first two weeks of September. Maturity notes were taken at one location in each district (northern, central, and southern), but for reference purposes are listed in the tables for all three locations in the same district. Maturity was recorded as the number of days after August 31st that a variety was considered mature. A variety was considered mature when 95 percent of the

Pods had turned brown. For all locations, just prior to harvest, average plant height and lodging (1=all plants fully erect, 5=all plants flat) were assessed in each plot. For each location, the center two rows of each four-row plot were harvested with a plot combine, total seed weight per plot and seed moisture were determined, and total plot seed weights subsequently were converted to bushels per acre. Varieties are listed in the report in order of ascending maturity date, and then by descending order of yield.

At the beginning of the growing season, plots were sampled for the presence of SCN. Soil samples, consisting of ten 1-inch-diameter, 6- to 8-inch-deep soil cores, were collected from the center 14 feet of the center two rows of each plot immediately after planting. SCN cysts were extracted from each soil sample, and SCN eggs were extracted from the cysts and counted. SCN egg population densities also were determined for each plot at the end of the growing season in an identical manner.

Conventional varieties and Roundup Ready® varieties were grouped and results were analyzed separately for each location in each district.

Because of the consistent relationship between higher soil pH and SCN population densities, all varieties also were field tested for tolerance to iron deficiency chlorosis (IDC). Each variety was planted in a hill plot consisting of five seeds per hill, with two replications per variety, at two high pH field locations. Locations were chosen by identifying IDC symptoms on soybeans growing at each field in the beginning of July. One field was located at the Iowa State University Woodruff Farm near Ames (central Iowa) and the other was located near Jefferson (west central Iowa). Prior to planting the experiments, the soybeans growing at each location were removed. The IDC evaluation plots near Ames were planted on July 11th and the plots near Jefferson were planted on July 17th. Notes were taken for IDC symptoms at each location approximately four weeks after planting and again at five weeks after planting. Varieties were rated on a scale of “1” to “5” with a “1” indicating no symptoms of IDC present and a “5” indicating plant death due to IDC. The scores from each location then were averaged together and an overall rating was assigned to each variety. One variety highly resistant to IDC and one variety highly susceptible to IDC also were included in the experiments as checks. The highly resistant variety scored an average of 1.1 and the highly susceptible variety scored an average of 3.0. The scores from these IDC field tests are listed in each location table in the report for reference.

Summary

The results of the experiments described in this report were consistent and dramatic. The data convincingly illustrate the benefits of utilizing SCN-resistant soybean varieties for management of this important soybean pest. Throughout the experiments, most of the soybean varieties with SCN resistance had greater yields than susceptible varieties, although some resistant varieties had greater yields than others. End-of-season SCN population densities were significantly greater in plots where susceptible varieties were grown relative to plots planted with resistant varieties. Nematode control is an extremely important aspect of growing SCN-resistant soybean varieties that must be considered when selecting soybean varieties.

Growing soybean varieties in SCN-infested fields in an attempt to maximize soybean yields in the short term without any consideration of the effect of the varieties on SCN population densities will seriously reduce the long-term soybean productivity of the land.

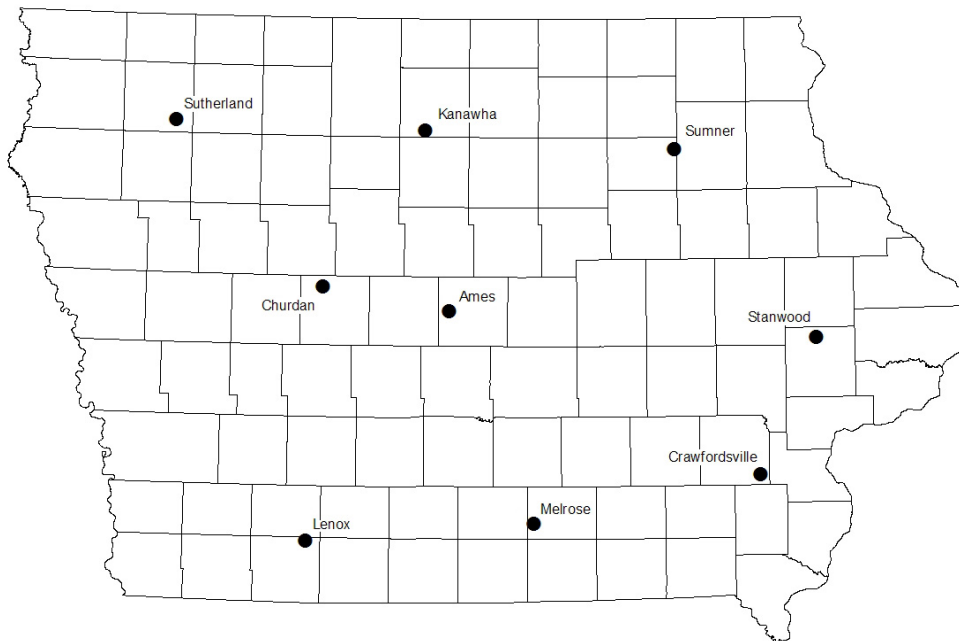
The results of these experiments illustrate that SCN-resistant varieties can suppress SCN reproduction and provide increased soybean yields relative to using susceptible varieties, however, most of the resistant varieties also suffered some yield loss. Currently, there are three main genetic sources for SCN resistance genes in commercial soybean varieties, namely PI88788, Peking, and PI437654 (also known as Hartwig and PUSCN14 resistance, the latter also known as CystX® resistance). Additionally, one variety with resistance genes from PI209332 is available. Each of these sources of SCN resistance contains several genes that confer resistance to the nematode. Consequently, soybean varieties developed from the various sources of resistance may not all contain the same genes in the same combinations. All of these sources of SCN resistance allow limited reproduction of only a few soybean cyst nematodes. Consequently, resistant varieties must be used in an integrated management program, along with the use of nonhost crops and scouting for early detection of SCN, to maximize yields and minimize reproduction of the pest on a long-term basis.

The data presented in this report are from a limited number of locations and should be used only as a beginning point for developing a SCN management program for any specific field. Performance of individual SCN-resistant soybean varieties in SCN-infested fields will vary among locations and years. **Growers are encouraged to evaluate several SCN-resistant soybean varieties at their own locations to determine the best varieties for their local conditions.**

Acknowledgments

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Map of 2003 Locations



Additional Information

There are several Iowa State University Extension publications available containing information about SCN. The biology, life cycle, and recommended management of SCN are described in publication PM 879, Soybean Cyst Nematode. Publication PM 1649, Soybean Cyst Nematode-Resistant Soybean Varieties for Iowa, lists soybean varieties with resistance to SCN. Publication IPM 47s, Scouting for Soybean Cyst Nematode, illustrates the recommended procedures for scouting for SCN. Finally, publication PD 32, Plant Nematode Sample Submission Form, is the form that should be submitted with soil samples to the Iowa State University Plant Disease Clinic for testing for SCN. All of these publications should be available at your county extension office or can be ordered by telephone from the office of Extension Distribution Center (515) 294-5247. Additionally, this report is available online at www.isuscnavarietytrials.info. Questions about this report can be directed to Iowa State University Plant Pathology (515) 294-1741.

Table 1.

Location	Sutherland (NW Iowa)	Planting date	5/21/2003	Initial SCN (eggs/100cc soil)			7,977				
Herbicide treatment	Conventional	Harvest date	10/6/2003	SCN HG Type / Race			7 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S21-A1</i>	2.1	None	3.3	14	8.8	27.3	1.8	29.9	10	11,450
<i>Latham Seed Company</i>	<i>Latham L-280 Brand</i>	1.7	None	2.4	15	8.6	24.5	1.5	30.8	9	16,250
Pioneer	9234	2.3	Peking	1.7	16	8.7	33.5	2.3	38.3	5	5,075
Dennis Ewing Farm Seed	2220+ SCN	2.2	PI 88788	3.3	17	8.1	28.5	2.0	40.4	1	2,375
<i>Stine Seed Company</i>	<i>Stine 2180</i>	2.3	None	3.8	17	9.1	27.0	2.0	31.8	8	20,075
Thompson Seeds, Inc.	T-3223 CN	2.2	PI 88788	2.5	18	8.5	35.3	2.3	39.6	2	3,075
Public	IA1008	1.8	PI 88788	2.0	18	8.8	33.5	2.0	38.6	4	3,450
Thompson Seeds, Inc.	T-3183 CN	1.9	PI 88788	2.1	20	8.8	31.3	2.8	37.1	6	2,750
Public	Loda	2.1	PI 88788	2.4	20	8.9	33.0	2.3	35.7	7	2,400
Dennis Ewing Farm Seed	2323 SCN	2.3	PI 88788	1.8	21	9.2	36.8	2.5	38.9	3	2,075
Latham Seed Company	Latham 2478T Brand	2.4	PI 88788	2.5	23	7.7	27.3	1.5	24.1	11	24,625
	Trial Average	2.1	---	---	18	8.6	30.7	2.1	35.0	---	8,509
	LSD ²	---	---	---	---	NS	2.9	0.6	5.1	---	13,200

Values presented in table are means. Entries are listed in order of maturity date (from the NC location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 2.

Location	Sutherland (NW Iowa)	Planting date	5/21/2003	Initial SCN (eggs/100cc soil)			5,824				
Herbicide treatment	Roundup®	Harvest date	10/6/2003	SCN HG Type / Race			7 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
<i>Pioneer</i>	<i>92B05</i>	2.0	None	4.0	12	8.4	28.8	1.5	31.8	50	13,875
KSC/Challenger	161 RR/SCN	1.6	PI 88788	2.3	13	9.6	23.0	1.0	35.8	34	13,775
Sand Seed Service, Inc.	SOI 2151NRR	2.1	Not given	2.3	16	7.5	30.0	2.0	44.6	2	2,250
UAP Midwest	DG33X19 ²	1.9	PI 88788	2.4	16	8.3	28.8	1.8	44.1	3	1,900
Midwest Seed Genetics	GR2031	2.0	PI 88788	2.3	16	10.1	31.5	1.5	43.4	4	2,900
Monsanto	ASGROW AG2107	2.1	PI 88788	3.0	16	6.3	31.0	1.0	40.4	12	3,825
Ottilie RO Seed	Ottilie RO 8218 RRN	2.1	PI 88788	2.3	16	8.7	29.3	1.3	40.3	14	2,875
ProfiSeed	PS 4204 CN RR	2.0	PI 88788	2.3	16	8.1	29.3	2.0	40.3	14	3,375
Prairie Brand Seed	PB-2183NRR	2.1	PI 88788	2.4	16	8.2	28.5	1.5	39.1	21	2,425
<i>Monsanto</i>	<i>ASGROW AG2105</i>	2.1	None	2.6	16	9.1	28.8	1.5	35.5	41	8,775
Thompson Seeds, Inc.	T-7193 CR	1.9	PI 88788	2.0	17	8.5	31.0	1.8	45.1	1	2,800
Wilson Seeds Inc.	2081RR	2.0	PI 88788	2.5	17	8.3	29.8	1.5	43.4	4	2,375
Latham Seed Company	Latham 2038R Brand	2.0	PI 88788	2.8	17	8.5	29.8	1.3	42.7	6	2,350
Albert Lea Seed House	Viking 1908CNRR	1.9	PI 88788	2.8	17	8.3	29.8	1.8	42.6	7	3,225
Kruger Seed Company	195+ RR/SCN	2.0	PI 88788	2.8	17	9.5	28.5	1.3	42.1	8	1,600
Monsanto	DEKALB DKB20-52	2.0	PI 88788	2.7	17	6.5	29.3	1.8	41.4	9	3,925
Prairie Brand Seed	PB-2092NRR	2.0	PI 88788 / PI 437654	3.1	17	8.4	32.5	2.0	36.2	29	2,150
Syngenta Seeds, Inc.	NK Brand X321R ²	2.1	PI 88788	2.5	17	7.7	29.5	1.8	36.0	33	1,325
Gold Country Seed, Inc.	Gold Country 4421NRR	2.0	PI 88788 / PI 437654	2.1	17	6.8	32.3	1.8	35.2	43	3,025
Albert Lea Seed House	Viking 1808CNRR ²	1.8	PI 88788	2.6	17	6.9	30.3	2.0	32.4	49	10,725
Garst Seed Company	Garst 2013RR/N	2.0	PI 88788 / PI 437654	2.4	18	7.8	32.8	2.0	39.8	18	3,575
ProfiSeed	PS 4203 HCN RR	2.0	PI 437654	2.1	18	7.8	32.5	1.8	38.8	22	2,825
Albert Lea Seed House	Viking 2108CNRR	2.1	PI 88788 / PI 437654	2.9	18	7.8	32.3	2.0	37.5	24	1,700
Dairyland Seed Co. Inc.	DST2132/RR ²	2.2	Peking	1.4	18	8.8	27.5	1.8	37.3	25	2,775
Royster-Clark, Inc.	VIGORO V20N3RR	2.0	PI 88788	3.4	18	8.6	34.5	2.0	37.2	26	2,375
Kruger Seed Company	221 RR/SCN	2.2	PI 88788 / PI 437654	3.3	18	7.9	30.3	2.0	36.1	30	1,625
Thompson Seeds, Inc.	T-7211 CR	2.1	PI 88788 / PI 437654	2.5	18	7.6	29.5	2.0	35.8	34	2,275
Garst Seed Company	Garst 2012RR/N	2.0	PI 88788	3.6	18	8.5	32.3	1.8	34.8	45	2,725
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S24-K4</i>	2.4	None	3.8	19	9.7	33.0	2.0	39.4	20	11,650
Stine Seed Company	Stine S1962-4	1.9	PI 88788	3.8	19	9.3	31.8	2.0	36.9	27	1,700
JC Robinson Seeds	H-2276 RR	2.2	PI 88788	3.5	19	7.9	32.5	2.0	35.1	44	1,850
Sand Seed Service, Inc.	SOI 2042NRR	2.0	PI 88788	3.5	19	9.3	32.0	2.0	33.8	46	1,925

Table 2 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
JC Robinson Seeds	H-1969 RR	1.9	PI 88788	3.0	19	8.3	31.0	2.0	33.8	46	2,675
UAP Midwest	DG3216NRR	2.1	PI 88788	3.0	19	5.9	31.0	1.8	33.1	48	2,850
UAP Midwest	DG3221NRR	2.2	PI 88788	3.0	20	8.7	33.5	2.0	36.7	28	2,175
Crow's Hybrid Corn Co.	C2315R	2.3	PI 88788	3.5	20	8.0	32.5	1.8	36.1	30	1,900
Merschman Seeds, Inc.	Merschman Venus RR	1.9	PI 88788	3.1	20	7.9	32.8	2.0	35.4	42	2,825
<i>Latham Seed Company</i>	<i>Latham L-418RR Brand</i>	<i>1.9</i>	<i>None</i>	<i>3.0</i>	<i>20</i>	<i>8.8</i>	<i>29.8</i>	<i>1.0</i>	<i>30.5</i>	<i>51</i>	<i>10,925</i>
Royster-Clark, Inc.	VIGORO V234RR	2.3	PI 88788	3.1	20	8.8	27.3	1.0	27.5	52	16,200
Monsanto	ASGROW AG2405	2.4	PI 88788	3.5	21	8.0	33.8	2.0	40.4	12	3,175
KSC/Challenger	233+ RR	2.3	Not given	3.0	21	10.3	28.3	1.5	35.7	36	16,525
Thompson Seeds, Inc.	T-7233 CR	2.3	PI 88788	3.0	21	8.8	32.0	2.0	35.7	36	1,675
JC Robinson Seeds	X32417 RR	2.4	PI 437654	3.5	22	9.2	28.3	1.8	39.5	19	2,000
Midwest Seed Genetics	GR2332	2.3	PI 88788	2.3	23	8.8	27.5	1.0	35.7	36	8,400
Dennis Ewing Farm Seed	277 RR/SCN	2.7	PI 88788	3.5	24	7.6	31.5	1.8	40.9	11	2,050
KSC/Challenger	267 RR/SCN	2.7	PI 88788	3.4	24	8.2	31.8	1.8	40.2	16	3,450
Syngenta Seeds, Inc.	NK Brand X326R ²	2.6	PI 88788	3.4	24	8.8	35.0	2.3	40.0	17	2,325
Kruger Seed Company	255 RR/SCN	2.4	PI 88788 / PI 437654	3.0	24	9.9	33.0	2.0	37.8	23	2,250
Latham Seed Company	Latham 688RRN Brand	2.5	PI 88788	2.6	24	8.7	30.3	2.0	36.1	30	3,150
Dairyland Seed Co. Inc.	DSR-255/RR	2.5	PI 88788	2.5	25	7.7	34.3	2.0	35.5	40	3,275
Four Star Seed Co.	3251RR	2.5	PI 88788	2.8	26	8.8	32.5	2.8	35.7	36	2,675
Prairie Brand Seed	PB-2606NRR	2.5	PI 88788	2.9	27	10.0	39.8	2.3	41.0	10	2,650
	Trial Average	2.1	---	---	19	8.4	30.9	1.8	37.7	---	4,224
	LSD ³	---	---	---	---	1.7	2.2	0.5	4.9	---	4,036

Values presented in table are means. Entries are listed in order of maturity date (from the NC location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 3.

Location	Kanawha (NC Iowa)	Planting date	5/17/2003	Initial SCN (eggs/100cc soil)			2,370				
Herbicide treatment	Conventional	Harvest date	10/1/2003	SCN HG Type / Race			2.5.7 / 5				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S21-A1</i>	2.1	None	3.3	14	7.7	35.3	2.0	38.0	8	1,975
<i>Latham Seed Company</i>	<i>Latham L-280 Brand</i>	1.7	None	2.4	15	7.6	31.3	2.0	36.2	11	800
Pioneer	9234	2.3	Peking	1.7	16	8.5	37.8	3.3	36.6	10	575
<i>Stine Seed Company</i>	<i>Stine 2180</i>	2.3	None	3.8	17	7.8	33.3	2.0	37.8	9	900
Dennis Ewing Farm Seed	2220+ SCN	2.2	PI 88788	3.3	17	7.4	31.0	2.0	46.5	3	900
Public	IA1008	1.8	PI 88788	2.0	18	7.8	39.5	1.3	47.5	2	950
Thompson Seeds, Inc.	T-3223 CN	2.2	PI 88788	2.5	18	7.5	36.8	2.0	44.3	5	950
Thompson Seeds, Inc.	T-3183 CN	1.9	PI 88788	2.1	20	10.0	35.0	2.5	42.8	6	875
Public	Loda	2.1	PI 88788	2.4	20	7.8	33.5	2.5	50.1	1	700
Dennis Ewing Farm Seed	2323 SCN	2.3	PI 88788	1.8	21	8.4	37.5	2.5	46.2	4	1,125
Latham Seed Company	Latham 2478T Brand	2.4	PI 88788	2.5	23	7.7	34.0	2.0	40.8	7	2,200
	Trial Average	2.1	---	---	18	8.0	35.0	2.2	42.4	---	1,086
	LSD ²	---	---	---	---	NS	2.7	0.6	3.9	---	946

Values presented in table are means. Entries are listed in order of maturity date, then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 4.

Location	Kanawha (NC Iowa)	Planting date	5/17/2003	Initial SCN (eggs/100cc soil)			2,192				
Herbicide treatment	Roundup®	Harvest date	10/1/2003	SCN HG Type / Race			2.5.7 / 5				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
<i>Pioneer</i>	<i>92B05</i>	2.0	None	4.0	12	7.8	31.8	1.8	40.2	50	1,900
KSC/Challenger	161 RR/SCN	1.6	PI 88788	2.3	13	7.1	28.5	1.8	40.0	51	3,225
ProfiSeed	PS 4204 CN RR	2.0	PI 88788	2.3	16	7.2	33.5	2.0	52.5	1	1,100
UAP Midwest	DG33X19 ²	1.9	PI 88788	2.4	16	6.6	32.5	1.5	50.1	5	1,600
Ottilie RO Seed	Ottilie RO 8218 RRN	2.1	PI 88788	2.3	16	7.8	33.0	1.0	49.4	10	1,125
Sand Seed Service, Inc.	SOI 2151NRR	2.1	Not given	2.3	16	7.3	31.3	1.5	48.7	12	1,400
Midwest Seed Genetics	GR2031	2.0	PI 88788	2.3	16	8.2	32.5	1.5	48.4	14	1,300
Monsanto	ASGROW AG2107	2.1	PI 88788	3.0	16	6.7	33.0	2.0	47.8	21	1,575
Prairie Brand Seed	PB-2183NRR	2.1	PI 88788	2.4	16	7.0	32.0	1.8	45.4	37	1,150
<i>Monsanto</i>	<i>ASGROW AG2105</i>	2.1	None	2.6	16	9.3	33.8	1.3	42.3	47	1,675
Kruger Seed Company	195+ RR/SCN	2.0	PI 88788	2.8	17	7.9	34.5	1.5	52.0	2	763
Latham Seed Company	Latham 2038R Brand	2.0	PI 88788	2.8	17	6.9	33.5	1.5	50.7	4	800
Thompson Seeds, Inc.	T-7193 CR	1.9	PI 88788	2.0	17	7.6	32.8	1.3	50.1	5	1,575
Wilson Seeds Inc.	2081RR	2.0	PI 88788	2.5	17	7.2	33.3	1.8	49.7	9	2,050
Albert Lea Seed House	Viking 1908CNRR	1.9	PI 88788	2.8	17	6.6	33.3	1.8	48.2	17	2,475
Monsanto	DEKALB DKB20-52	2.0	PI 88788	2.7	17	7.3	33.0	1.5	47.6	22	2,050
Gold Country Seed, Inc.	Gold Country 4421NRR	2.0	PI 88788 / PI 437654	2.1	17	8.5	36.3	2.3	45.4	37	1,650
Prairie Brand Seed	PB-2092NRR	2.0	PI 88788 / PI 437654	3.1	17	7.8	36.5	2.3	44.4	42	2,550
Syngenta Seeds, Inc.	NK Brand X321R ²	2.1	PI 88788	2.5	17	6.9	31.3	1.5	40.6	49	625
Albert Lea Seed House	Viking 1808CNRR ²	1.8	PI 88788	2.6	17	6.3	32.5	2.0	33.6	52	2,875
Garst Seed Company	Garst 2012RR/N	2.0	PI 88788	3.6	18	8.1	35.5	2.0	51.6	3	1,275
Dairyland Seed Co. Inc.	DST2132/RR ²	2.2	Peking	1.4	18	7.9	32.0	2.0	47.4	27	1,125
Kruger Seed Company	221 RR/SCN	2.2	PI 88788 / PI 437654	3.3	18	6.7	36.0	2.0	46.5	33	2,575
Royster-Clark, Inc.	VIGORO V20N3RR	2.0	PI 88788	3.4	18	7.9	35.0	1.8	45.9	34	1,425
Albert Lea Seed House	Viking 2108CNRR	2.1	PI 88788 / PI 437654	2.9	18	7.4	35.3	2.3	44.6	40	1,700
ProfiSeed	PS 4203 HCN RR	2.0	PI 437654	2.1	18	5.9	36.0	2.0	44.5	41	1,750
Thompson Seeds, Inc.	T-7211 CR	2.1	PI 88788 / PI 437654	2.5	18	7.5	36.8	2.0	43.9	44	1,175
Garst Seed Company	Garst 2013RR/N	2.0	PI 88788 / PI 437654	2.4	18	9.0	38.3	2.0	43.1	46	1,900
UAP Midwest	DG3216NRR	2.1	PI 88788	3.0	19	6.3	35.0	1.5	48.5	13	965
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S24-K4</i>	2.4	None	3.8	19	8.8	37.0	2.8	48.4	14	2,300
Stine Seed Company	Stine S1962-4	1.9	PI 88788	3.8	19	8.3	36.0	1.8	47.6	22	750
Sand Seed Service, Inc.	SOI 2042NRR	2.0	PI 88788	3.5	19	9.1	34.8	1.5	47.5	25	975

Table 4 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
JC Robinson Seeds	H-1969 RR	1.9	PI 88788	3.0	19	8.5	36.3	1.8	47.1	29	1,050
JC Robinson Seeds	H-2276 RR	2.2	PI 88788	3.5	19	7.3	35.3	2.0	45.9	34	975
Crow's Hybrid Corn Co.	C2315R	2.3	PI 88788	3.5	20	8.0	35.8	1.5	48.2	17	975
Royster-Clark, Inc.	VIGORO V234RR	2.3	PI 88788	3.1	20	8.3	32.5	1.5	47.9	20	2,375
<i>Latham Seed Company</i>	<i>Latham L-418RR Brand</i>	<i>1.9</i>	<i>None</i>	<i>3.0</i>	<i>20</i>	<i>8.3</i>	<i>35.3</i>	<i>1.5</i>	<i>47.5</i>	<i>25</i>	<i>1,350</i>
UAP Midwest	DG3221NRR	2.2	PI 88788	3.0	20	8.3	34.8	2.0	46.9	30	1,125
Merschman Seeds, Inc.	Merschman Venus RR	1.9	PI 88788	3.1	20	5.7	35.3	2.0	44.3	43	1,050
Monsanto	ASGROW AG2405	2.4	PI 88788	3.5	21	7.9	35.8	1.5	50.1	5	1,400
KSC/Challenger	233+ RR	2.3	Not given	3.0	21	8.2	32.0	1.5	48.2	17	2,400
Thompson Seeds, Inc.	T-7233 CR	2.3	PI 88788	3.0	21	9.8	36.5	1.8	45.1	39	638
JC Robinson Seeds	X32417 RR	2.4	PI 437654	3.5	22	6.8	34.8	2.0	43.2	45	575
Midwest Seed Genetics	GR2332	2.3	PI 88788	2.3	23	7.7	33.5	1.5	46.9	30	2,725
Dennis Ewing Farm Seed	277 RR/SCN	2.7	PI 88788	3.5	24	8.3	35.3	1.8	49.4	10	1,725
Syngenta Seeds, Inc.	NK Brand X326R ²	2.6	PI 88788	3.4	24	8.3	36.5	2.5	48.4	14	1,125
Latham Seed Company	Latham 688RRN Brand	2.5	PI 88788	2.6	24	6.3	33.5	2.0	47.6	22	975
KSC/Challenger	267 RR/SCN	2.7	PI 88788	3.4	24	6.9	36.3	2.0	47.4	27	925
Kruger Seed Company	255 RR/SCN	2.4	PI 88788 / PI 437654	3.0	24	8.5	36.8	2.0	45.8	36	1,025
Dairyland Seed Co. Inc.	DSR-255/RR	2.5	PI 88788	2.5	25	6.7	38.3	2.3	46.6	32	950
Four Star Seed Co.	3251RR	2.5	PI 88788	2.8	26	8.1	38.5	3.0	42.3	47	1,725
Prairie Brand Seed	PB-2606NRR	2.5	PI 88788	2.9	27	6.8	41.3	2.5	50.1	5	2,325
	Trial Average	2.1	---	---	19	7.6	34.6	1.8	46.6	---	1,515
	LSD ³	---	---	---	---	1.7	2.4	0.6	3.7	---	1,353

Values presented in table are means. Entries are listed in order of maturity date, then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 5.

Location	Sumner (NE Iowa)	Planting date	5/18/2003	Initial SCN (eggs/100cc soil)				2,595			
Herbicide treatment	Conventional	Harvest date	10/2/2003	SCN HG Type / Race				2 / 1			
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S21-A1</i>	2.1	None	3.3	14	8.4	28.8	1.5	30.4	5	7,525
<i>Latham Seed Company</i>	<i>Latham L-280 Brand</i>	1.7	None	2.4	15	7.7	26.8	1.3	35.1	2	3,350
Pioneer	9234	2.3	Peking	1.7	16	7.2	27.5	1.5	31.6	3	838
Dennis Ewing Farm Seed	2220+ SCN	2.2	PI 88788	3.3	17	9.2	24.0	1.3	31.3	4	1,200
<i>Stine Seed Company</i>	<i>Stine 2180</i>	2.3	None	3.8	17	9.0	27.3	1.3	24.4	11	4,200
Thompson Seeds, Inc.	T-3223 CN	2.2	PI 88788	2.5	18	8.4	31.3	1.3	30.2	7	1,725
Public	IA1008	1.8	PI 88788	2.0	18	6.4	29.5	1.3	28.7	8	1,100
Thompson Seeds, Inc.	T-3183 CN	1.9	PI 88788	2.1	20	7.3	28.3	1.8	36.8	1	1,175
Public	Loda	2.1	PI 88788	2.4	20	7.4	25.8	1.8	30.4	5	475
Dennis Ewing Farm Seed	2323 SCN	2.3	PI 88788	1.8	21	8.3	30.8	1.3	27.9	10	900
Latham Seed Company	Latham 2478T Brand	2.4	PI 88788	2.5	23	6.3	26.8	1.3	28.5	9	4,275
	Trial Average	2.1	---	---	18	7.8	27.9	1.4	30.5	---	2,433
	LSD ²	---	---	---	---	NS	NS	NS	NS	---	2,266

Values presented in table are means. Entries are listed in order of maturity date (from the NC location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 6.

Location	Sumner (NE Iowa)	Planting date	5/18/2003	Initial SCN (eggs/100cc soil)			3,718				
Herbicide treatment	Roundup®	Harvest date	10/2/2003	SCN HG Type / Race			2 / 1				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
<i>Pioneer</i>	<i>92B05</i>	2.0	None	4.0	12	8.2	29.3	2.0	31.8	51	11,125
KSC/Challenger	161 RR/SCN	1.6	PI 88788	2.3	13	6.7	22.8	1.3	32.4	50	9,975
Sand Seed Service, Inc.	SOI 2151NRR	2.1	Not given	2.3	16	6.1	29.0	1.8	44.1	1	1,350
Ottilie RO Seed	Ottilie RO 8218 RRN	2.1	PI 88788	2.3	16	6.8	30.5	2.0	44.1	1	1,475
Midwest Seed Genetics	GR2031	2.0	PI 88788	2.3	16	5.5	30.0	1.5	43.1	5	1,525
ProfiSeed	PS 4204 CN RR	2.0	PI 88788	2.3	16	6.6	29.8	2.0	42.7	6	2,450
Monsanto	ASGROW AG2107	2.1	PI 88788	3.0	16	6.1	27.5	2.0	39.1	17	2,475
Prairie Brand Seed	PB-2183NRR	2.1	PI 88788	2.4	16	6.2	28.8	2.0	38.7	21	2,375
UAP Midwest	DG33X19 ²	1.9	PI 88788	2.4	16	8.0	29.5	1.8	38.5	24	1,275
<i>Monsanto</i>	<i>ASGROW AG2105</i>	2.1	None	2.6	16	8.1	27.3	1.3	34.2	45	8,625
Latham Seed Company	Latham 2038R Brand	2.0	PI 88788	2.8	17	6.8	28.0	1.8	44.0	3	2,650
Wilson Seeds Inc.	2081RR	2.0	PI 88788	2.5	17	7.0	30.0	1.5	43.9	4	2,300
Monsanto	DEKALB DKB20-52	2.0	PI 88788	2.7	17	6.8	29.3	2.0	41.9	8	1,875
Thompson Seeds, Inc.	T-7193 CR	1.9	PI 88788	2.0	17	6.9	29.5	1.5	41.6	9	1,200
Albert Lea Seed House	Viking 1908CNRR	1.9	PI 88788	2.8	17	7.5	29.3	1.5	38.9	19	1,600
Kruger Seed Company	195+ RR/SCN	2.0	PI 88788	2.8	17	8.1	30.5	1.8	38.9	19	1,075
Syngenta Seeds, Inc.	NK Brand X321R ²	2.1	PI 88788	2.5	17	6.8	28.8	1.5	38.4	25	1,125
Prairie Brand Seed	PB-2092NRR	2.0	PI 88788 / PI 437654	3.1	17	7.6	32.8	1.8	37.9	30	3,250
Gold Country Seed, Inc.	Gold Country 4421NRR	2.0	PI 88788 / PI 437654	2.1	17	6.1	32.5	2.0	37.6	31	2,500
Albert Lea Seed House	Viking 1808CNRR ²	1.8	PI 88788	2.6	17	6.2	25.8	1.5	25.4	52	3,800
Royster-Clark, Inc.	VIGORO V20N3RR	2.0	PI 88788	3.4	18	8.1	30.8	1.8	40.2	15	2,350
Thompson Seeds, Inc.	T-7211 CR	2.1	PI 88788 / PI 437654	2.5	18	6.7	32.3	2.0	39.0	18	2,575
Garst Seed Company	Garst 2013RR/N	2.0	PI 88788 / PI 437654	2.4	18	7.0	33.5	2.0	37.6	31	2,475
Garst Seed Company	Garst 2012RR/N	2.0	PI 88788	3.6	18	7.5	30.0	1.5	36.3	35	2,375
Albert Lea Seed House	Viking 2108CNRR	2.1	PI 88788 / PI 437654	2.9	18	7.0	32.3	2.0	35.8	37	1,325
Dairyland Seed Co. Inc.	DST2132/RR ²	2.2	Peking	1.4	18	6.2	26.8	1.8	35.8	37	2,300
Kruger Seed Company	221 RR/SCN	2.2	PI 88788 / PI 437654	3.3	18	7.6	31.0	2.0	35.7	40	2,575
ProfiSeed	PS 4203 HCN RR	2.0	PI 437654	2.1	18	5.8	31.3	1.8	33.5	47	1,450
Stine Seed Company	Stine S1962-4	1.9	PI 88788	3.8	19	8.0	31.5	1.5	40.9	12	1,475
Sand Seed Service, Inc.	SOI 2042NRR	2.0	PI 88788	3.5	19	8.6	31.0	2.0	38.4	27	3,200
JC Robinson Seeds	H-2276 RR	2.2	PI 88788	3.5	19	8.2	31.8	1.5	38.2	28	1,225
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S24-K4</i>	2.4	None	3.8	19	7.6	33.0	2.0	37.2	33	8,900

Table 6 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
JC Robinson Seeds	H-1969 RR	1.9	PI 88788	3.0	19	6.4	31.5	2.0	36.5	34	1,300
UAP Midwest	DG3216NRR	2.1	PI 88788	3.0	19	6.2	29.3	2.0	33.6	46	3,025
Merschman Seeds, Inc.	Merschman Venus RR	1.9	PI 88788	3.1	20	6.9	30.5	2.0	38.6	22	2,825
<i>Latham Seed Company</i>	<i>Latham L-418RR Brand</i>	<i>1.9</i>	<i>None</i>	<i>3.0</i>	<i>20</i>	<i>6.9</i>	<i>27.8</i>	<i>1.8</i>	<i>38.4</i>	<i>25</i>	<i>9,550</i>
Royster-Clark, Inc.	VIGORO V234RR	2.3	PI 88788	3.1	20	7.1	29.8	1.8	35.4	41	6,325
Crow's Hybrid Corn Co.	C2315R	2.3	PI 88788	3.5	20	7.2	28.8	1.5	34.9	42	2,600
UAP Midwest	DG3221NRR	2.2	PI 88788	3.0	20	5.8	29.8	1.8	33.3	49	2,500
Thompson Seeds, Inc.	T-7233 CR	2.3	PI 88788	3.0	21	7.2	31.3	1.8	41.3	10	1,475
KSC/Challenger	233+ RR	2.3	Not given	3.0	21	7.3	29.0	2.0	40.3	14	8,250
Monsanto	ASGROW AG2405	2.4	PI 88788	3.5	21	5.6	32.5	1.8	38.6	22	1,675
JC Robinson Seeds	X32417 RR	2.4	PI 437654	3.5	22	7.3	28.5	1.8	35.8	37	3,050
Midwest Seed Genetics	GR2332	2.3	PI 88788	2.3	23	6.3	28.5	2.0	38.2	28	12,475
Kruger Seed Company	255 RR/SCN	2.4	PI 88788 / PI 437654	3.0	24	8.5	34.0	2.0	42.0	7	1,850
KSC/Challenger	267 RR/SCN	2.7	PI 88788	3.4	24	6.8	29.8	2.0	41.1	11	5,225
Syngenta Seeds, Inc.	NK Brand X326R ²	2.6	PI 88788	3.4	24	6.9	34.0	2.0	40.1	16	2,625
Dennis Ewing Farm Seed	277 RR/SCN	2.7	PI 88788	3.5	24	7.8	29.3	2.0	36.3	35	4,550
Latham Seed Company	Latham 688RRN Brand	2.5	PI 88788	2.6	24	5.7	28.3	2.0	34.9	42	2,875
Dairyland Seed Co. Inc.	DSR-255/RR	2.5	PI 88788	2.5	25	5.8	32.5	2.0	34.6	44	1,350
Four Star Seed Co.	3251RR	2.5	PI 88788	2.8	26	7.9	32.3	2.0	33.4	48	2,400
Prairie Brand Seed	PB-2606NRR	2.5	PI 88788	2.9	27	7.7	39.8	2.0	40.9	12	2,200
	Trial Average	2.1	---	---	19	7.0	30.2	1.8	38.0	---	3,353
	LSD ³	---	---	---	---	1.9	2.5	NS	6.2	---	3,379

Values presented in table are means. Entries are listed in order of maturity date (from the NC location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 7.

Location	Churdan (WC Iowa)	Planting date	5/22/2003	Initial SCN (eggs/100cc soil)				11,373			
Herbicide treatment	Conventional	Harvest date	10/7/2003	SCN HG Type / Race				0 / 3			
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Public	IA1008	1.8	PI 88788	2.0	19	8.0	30.8	1.3	50.2	7	1,775
Pioneer	9234	2.3	Peking	1.7	21	8.3	31.5	2.0	46.8	10	1,800
Latham Seed Company	Latham E2609T ²	2.6	CystX	2.5	21	6.8	31.5	1.8	46.6	11	4,650
<i>Latham Seed Company</i>	<i>Latham L-570 Brand</i>	<i>2.1</i>	<i>None</i>	<i>2.4</i>	<i>22</i>	<i>7.5</i>	<i>24.8</i>	<i>1.0</i>	<i>41.3</i>	<i>13</i>	<i>5,500</i>
<i>Pioneer</i>	<i>92B63</i>	<i>2.6</i>	<i>None</i>	<i>3.9</i>	<i>23</i>	<i>8.3</i>	<i>27.8</i>	<i>1.3</i>	<i>47.5</i>	<i>9</i>	<i>8,350</i>
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S25-J5</i>	<i>2.5</i>	<i>None</i>	<i>2.9</i>	<i>24</i>	<i>7.6</i>	<i>26.0</i>	<i>1.0</i>	<i>44.0</i>	<i>12</i>	<i>5,300</i>
Public	Loda	2.1	PI 88788	2.4	24	7.1	28.8	1.5	55.8	1	5,500
Public	Dwight	2.9	PI 88788	2.4	27	8.3	28.5	1.5	53.0	3	3,150
Public	Jack	2.9	PI 88788	2.8	28	7.0	39.8	3.0	53.3	2	2,325
UAP Midwest	DG3251N	2.5	PI 88788	1.9	29	8.0	30.0	1.0	51.1	6	3,233
KSC/Challenger	2990 SCN	2.9	PI 88788	3.0	30	8.4	30.5	1.8	53.0	3	3,725
<i>Stine Seed Company</i>	<i>Stine 2788</i>	<i>2.9</i>	<i>None</i>	<i>3.8</i>	<i>31</i>	<i>7.9</i>	<i>29.3</i>	<i>1.0</i>	<i>52.3</i>	<i>5</i>	<i>3,650</i>
Public	IA3005	3.6	PI 88788	3.4	32	8.5	29.8	2.3	48.3	8	2,900
	Trial Average	2.6	---	---	25	7.8	29.9	1.6	49.5	---	3,989
	LSD ³	---	---	---	---	NS	3.8	0.6	6.2	---	3,116

Values presented in table are means. Entries are listed in order of maturity date (from the C location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 8.

Location	Churdan (WC Iowa)	Planting date	5/22/2003	Initial SCN (eggs/100cc soil)			7,812				
Herbicide treatment	Roundup®	Harvest date	10/7/2003	SCN HG Type / Race			0 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Dairyland Seed Co. Inc.	DST2132/RR ²	2.2	Peking	1.4	21	7.9	26.5	1.3	49.1	37	1,525
Monsanto	DEKALB DKB23-51	2.3	None	3.0	21	8.3	24.5	1.3	48.2	41	3,800
Latham Seed Company	Latham L-647RR Brand	2.4	None	3.4	22	8.4	25.0	1.3	48.2	41	6,325
UAP Midwest	DG32E26	2.6	PI 88788	3.4	26	8.1	26.5	1.8	48.4	40	1,175
Merschman Seeds, Inc.	Merschman Mohawk RR	2.4	PI 437654	2.8	27	9.3	28.3	1.5	54.0	14	1,250
Syngenta Seeds, Inc.	NK Brand X326R ²	2.6	PI 88788	3.4	27	8.4	28.0	1.5	52.3	22	1,775
Dennis Ewing Farm Seed	277 RR/SCN	2.7	PI 88788	3.5	27	7.3	27.3	1.0	51.6	25	1,750
Kruger Seed Company	255 RR/SCN	2.4	PI 88788 / PI 437654	3.0	27	8.5	28.8	1.0	51.3	26	2,000
Dairyland Seed Co. Inc.	DSR-255/RR	2.5	PI 88788	2.5	27	7.2	29.0	1.3	49.7	32	2,825
Pioneer	92B74	2.7	None	3.1	27	9.4	27.0	1.0	44.9	45	4,950
Prairie Brand Seed	PB-2606NRR	2.5	PI 88788	2.9	28	7.1	32.0	2.3	55.6	6	1,725
Thompson Seeds, Inc.	T-7246 CR	2.4	PI 88788	2.9	28	8.4	26.8	1.0	54.1	13	3,350
Kruger Seed Company	288 RR/SCN	2.8	PI 88788 / Peking	2.1	28	8.4	29.5	1.5	54.0	14	1,675
Merschman Seeds, Inc.	Merschman Chickasaw VIII RR	2.9	PI 88788	1.9	29	8.8	27.0	1.3	57.0	1	1,675
Merschman Seeds, Inc.	Merschman Mohegan IV RR	2.6	PI 88788	3.0	29	8.4	30.5	1.0	49.5	34	1,925
Ottillie RO Seed	Ottillie RO 8282 RRN	2.8	PI 88788	3.8	29	9.3	27.3	1.3	48.6	38	1,875
Ottillie RO Seed	Ottillie RO 8266 RRN	2.6	PI 88788	3.5	29	8.5	29.5	1.0	48.2	41	1,650
Sand Seed Service, Inc.	SOI 2642NRR	2.6	PI 88788	3.2	30	8.4	30.3	2.0	56.8	2	2,725
Latham Seed Company	Latham L2878R Brand	2.8	PI 88788	2.9	30	8.0	31.3	1.5	53.4	18	1,525
UAP Midwest	DG35R27	2.7	PI 88788	2.8	30	8.3	29.8	1.5	52.6	21	850
Dennis Ewing Farm Seed	289 RR/SCN	2.8	PI 88788 / Peking	2.6	30	8.2	31.3	1.8	51.8	24	1,475
Latham Seed Company	Latham E2709R ²	2.7	CystX	2.5	30	9.2	33.0	1.0	49.6	33	2,650
KSC/Challenger	303 RR/SCN	2.9	PI 88788	3.0	30	8.4	26.8	1.3	49.5	34	1,750
Four Star Seed Co.	3251RR	2.5	PI 88788	2.8	30	10.1	26.3	1.5	49.2	36	2,075
JC Robinson Seeds	H-2698 RR	2.6	PI 88788	2.3	30	8.6	27.0	1.3	48.2	41	800
Midwest Seed Genetics	GR2931	2.9	PI 88788	3.6	31	7.8	27.0	1.0	56.6	3	2,025
Sand Seed Service, Inc.	SOI 2858NRR	2.8	PI 88788	3.3	31	9.1	30.5	1.3	56.2	4	2,050
Thompson Seeds, Inc.	T-7283 CR	2.8	PI 88788	2.8	31	7.7	28.3	1.5	55.5	7	2,200
Dennis Ewing Farm Seed	282 RR/SCN (prev 288+)	2.8	PI 88788 / Peking	2.4	31	9.0	29.8	1.3	55.1	8	875
Prairie Brand Seed	PB-2892NRR	2.8	PI 88788	2.9	31	9.2	30.5	1.8	54.6	10	1,700
Stine Seed Company	Stine S2842-4	2.8	PI 88788	3.3	31	9.4	26.5	1.3	54.4	11	2,225

Table 8 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
JC Robinson Seeds	H-2991 RR	2.9	PI 88788	3.5	31	8.2	26.5	1.0	54.2	12	2,275
Syngenta Seeds, Inc.	NK Brand S28-L9	2.8	PI 88788	3.0	31	7.3	31.3	3.0	53.9	16	1,950
Crow's Hybrid Corn Co.	CRX292N-3 ²	2.9	PI 88788	2.5	31	8.3	29.5	1.5	53.6	17	2,750
Monsanto	ASGROW AG2801	2.8	PI 88788	3.8	31	7.5	27.3	1.0	53.0	20	1,400
Kruger Seed Company	299 RR/SCN	2.9	PI 88788	2.6	31	8.1	28.3	1.5	50.8	30	1,825
Garst Seed Company	Garst 3212RR/N	3.2	PI 88788	2.4	31	10.6	34.8	1.8	50.3	31	1,500
Four Star Seed Co.	3282RR	2.8	PI 88788	3.3	32	8.5	31.5	2.0	55.7	5	2,100
Garst Seed Company	Garst 2812RR/N	2.8	PI 88788	2.3	32	8.0	29.3	1.5	52.3	22	1,525
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S29-C9</i>	2.9	<i>None</i>	3.3	32	9.2	36.0	2.3	51.0	28	5,050
Prairie Brand Seed	PB-2983NRR	2.9	PI 88788 / PI 437654	2.9	32	8.5	29.5	2.0	48.6	38	1,300
KSC/Challenger	339 RR	3.3	Not given	2.3	33	8.3	29.3	1.5	54.7	9	1,850
Merschman Seeds, Inc.	Merschman Cherokee XRR	2.9	PI 88788	3.5	33	8.0	27.0	1.0	53.3	19	1,775
Wilken Seed Grains Inc.	Wilken 3421NRR	3.2	PI 88788	3.6	33	8.1	32.3	1.8	51.1	27	6,950
Monsanto	DEKALB DKB31-52	3.1	PI 88788	3.4	33	9.8	30.8	1.5	50.9	29	5,000
	Trial Average	2.7	---	---	29	8.5	29.0	1.4	52.0	---	2,298
	LSD ³	---	---	---	---	NS	3.5	0.6	5.2	---	1,986

Values presented in table are means. Entries are listed in order of maturity date (from the C location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 9.

Location	Ames (C Iowa)	Planting date	5/20/2003	Initial SCN (eggs/100cc soil)			804				
Herbicide treatment	Conventional	Harvest date	10/4/2003	SCN HG Type / Race			0 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Public	IA1008	1.8	PI 88788	2.0	19	5.3	28.8	1.0	34.6	11	300
Latham Seed Company	Latham E2609T ²	2.6	CystX	2.5	21	7.9	32.5	2.3	29.7	12	438
Pioneer	9234	2.3	Peking	1.7	21	6.5	26.0	2.0	27.5	13	300
<i>Latham Seed Company</i>	<i>Latham L-570 Brand</i>	<i>2.1</i>	<i>None</i>	<i>2.4</i>	<i>22</i>	<i>5.2</i>	<i>26.0</i>	<i>1.5</i>	<i>38.8</i>	<i>6</i>	<i>1,200</i>
<i>Pioneer</i>	<i>92B63</i>	<i>2.6</i>	<i>None</i>	<i>3.9</i>	<i>23</i>	<i>7.3</i>	<i>30.8</i>	<i>2.0</i>	<i>36.7</i>	<i>9</i>	<i>4,275</i>
Public	Loda	2.1	PI 88788	2.4	24	5.9	34.0	2.0	39.5	3	225
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S25-J5</i>	<i>2.5</i>	<i>None</i>	<i>2.9</i>	<i>24</i>	<i>5.9</i>	<i>26.3</i>	<i>1.3</i>	<i>37.5</i>	<i>7</i>	<i>2,175</i>
Public	Dwight	2.9	PI 88788	2.4	27	7.8	31.5	2.0	42.1	1	250
Public	Jack	2.9	PI 88788	2.8	28	6.1	43.0	2.8	37.0	8	250
UAP Midwest	DG3251N	2.5	PI 88788	1.9	29	6.0	31.5	1.8	39.1	5	475
KSC/Challenger	2990 SCN	2.9	PI 88788	3.0	30	6.7	30.8	2.0	40.5	2	238
<i>Stine Seed Company</i>	<i>Stine 2788</i>	<i>2.9</i>	<i>None</i>	<i>3.8</i>	<i>31</i>	<i>6.0</i>	<i>29.5</i>	<i>1.8</i>	<i>39.5</i>	<i>3</i>	<i>1,825</i>
Public	IA3005	3.6	PI 88788	3.4	32	6.7	33.5	2.8	35.0	10	313
	Trial Average	2.6	---	---	25	6.4	31.1	1.9	36.7	---	943
	LSD ³	---	---	---	---	1.5	3.1	0.6	5.6	---	1,443

Values presented in table are means. Entries are listed in order of maturity date, then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 10.

Location	Ames (C Iowa)	Planting date	5/20/2003	Initial SCN (eggs/100cc soil)	758						
Herbicide treatment	Roundup®	Harvest date	10/4/2003	SCN HG Type / Race	0 / 3						
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
<i>Monsanto</i>	<i>DEKALB DKB23-51</i>	2.3	None	3.0	21	6.8	30.0	2.0	39.5	22	1,475
Dairyland Seed Co. Inc.	DST2132/RR ²	2.2	Peking	1.4	21	7.2	30.3	1.8	38.1	33	125
<i>Latham Seed Company</i>	<i>Latham L-647RR Brand</i>	2.4	None	3.4	22	8.1	31.3	2.3	38.0	35	688
UAP Midwest	DG32E26	2.6	PI 88788	3.4	26	7.1	30.5	1.5	36.2	40	188
Kruger Seed Company	255 RR/SCN	2.4	PI 88788 / PI 437654	3.0	27	9.0	32.5	1.8	41.2	8	200
Dennis Ewing Farm Seed	277 RR/SCN	2.7	PI 88788	3.5	27	7.1	31.8	2.0	40.3	15	225
Merschman Seeds, Inc.	Merschman Mohawk RR	2.4	PI 437654	2.8	27	5.5	29.5	1.3	39.9	20	463
Dairyland Seed Co. Inc.	DSR-255/RR	2.5	PI 88788	2.5	27	5.8	33.3	2.0	39.4	25	175
Syngenta Seeds, Inc.	NK Brand X326R ²	2.6	PI 88788	3.4	27	7.1	33.5	2.0	38.1	33	163
<i>Pioneer</i>	<i>92B74</i>	2.7	None	3.1	27	7.8	29.3	1.5	37.6	37	2,400
Prairie Brand Seed	PB-2606NRR	2.5	PI 88788	2.9	28	6.7	36.3	2.5	44.0	1	238
Thompson Seeds, Inc.	T-7246 CR	2.4	PI 88788	2.9	28	8.5	29.8	1.3	40.5	11	425
Kruger Seed Company	288 RR/SCN	2.8	PI 88788 / Peking	2.1	28	7.3	34.0	2.0	39.1	28	250
Ottilie RO Seed	Ottilie RO 8266 RRN	2.6	PI 88788	3.5	29	6.1	33.3	2.0	41.2	8	300
Merschman Seeds, Inc.	Merschman Chickasaw VIIIR	2.9	PI 88788	1.9	29	7.1	35.3	1.8	40.6	10	138
Ottilie RO Seed	Ottilie RO 8282 RRN	2.8	PI 88788	3.8	29	6.8	29.3	1.8	40.3	15	425
Merschman Seeds, Inc.	Merschman Mohegan IVRR	2.6	PI 88788	3.0	29	6.3	36.5	2.0	39.5	22	175
Dennis Ewing Farm Seed	289 RR/SCN	2.8	PI 88788 / Peking	2.6	30	7.5	37.0	1.8	43.8	2	225
Sand Seed Service, Inc.	SOI 2642NRR	2.6	PI 88788	3.2	30	8.3	38.0	2.5	41.7	4	200
Latham Seed Company	Latham L2878R Brand	2.8	PI 88788	2.9	30	7.3	31.3	2.0	40.3	15	188
KSC/Challenger	303 RR/SCN	2.9	PI 88788	3.0	30	7.6	29.3	1.8	39.2	26	100
UAP Midwest	DG35R27	2.7	PI 88788	2.8	30	8.3	34.0	1.8	38.9	29	250
Four Star Seed Co.	3251RR	2.5	PI 88788	2.8	30	8.3	34.3	2.8	38.5	30	350
JC Robinson Seeds	H-2698 RR	2.6	PI 88788	2.3	30	6.8	34.0	2.5	37.1	38	213
Latham Seed Company	Latham E2709R ²	2.7	CystX	2.5	30	7.7	35.5	1.8	35.4	42	188
Prairie Brand Seed	PB-2892NRR	2.8	PI 88788	2.9	31	8.1	36.5	2.0	42.1	3	650
Sand Seed Service, Inc.	SOI 2858NRR	2.8	PI 88788	3.3	31	7.4	32.0	1.8	41.7	4	250
Monsanto	ASGROW AG2801	2.8	PI 88788	3.8	31	6.2	32.5	2.0	41.7	4	263
Thompson Seeds, Inc.	T-7283 CR	2.8	PI 88788	2.8	31	5.7	34.0	2.0	40.5	11	250
Stine Seed Company	Stine S2842-4	2.8	PI 88788	3.3	31	8.3	32.8	1.8	40.5	11	200
Dennis Ewing Farm Seed	282 RR/SCN (prev 288+)	2.8	PI 88788 / Peking	2.4	31	7.9	32.8	2.0	40.5	11	950

Table 10 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Crow's Hybrid Corn Co.	CRX292N-3 ²	2.9	PI 88788	2.5	31	7.3	35.0	2.0	40.3	15	225
Midwest Seed Genetics	GR2931	2.9	PI 88788	3.6	31	6.1	30.3	1.8	39.5	22	150
Kruger Seed Company	299 RR/SCN	2.9	PI 88788	2.6	31	7.9	34.5	2.5	38.4	31	200
Syngenta Seeds, Inc.	NK Brand S28-L9	2.8	PI 88788	3.0	31	8.4	37.3	2.8	38.4	31	125
JC Robinson Seeds	H-2991 RR	2.9	PI 88788	3.5	31	5.9	28.8	2.0	38.0	35	325
Garst Seed Company	Garst 3212RR/N	3.2	PI 88788	2.4	31	10.3	39.0	2.8	36.0	41	375
Garst Seed Company	Garst 2812RR/N	2.8	PI 88788	2.3	32	8.2	35.5	2.0	41.7	4	875
Four Star Seed Co.	3282RR	2.8	PI 88788	3.3	32	7.8	33.8	2.5	39.2	26	238
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S29-C9</i>	2.9	<i>None</i>	3.3	32	7.3	34.8	2.5	32.6	44	475
Prairie Brand Seed	PB-2983NRR	2.9	PI 88788 / PI 437654	2.9	32	8.2	34.3	3.0	31.9	45	125
KSC/Challenger	339 RR	3.3	Not given	2.3	33	7.2	35.5	2.5	40.3	15	163
Merschman Seeds, Inc.	Merschman Cherokee XRR	2.9	PI 88788	3.5	33	6.3	27.5	1.3	39.7	21	88
Monsanto	DEKALB DKB31-52	3.1	PI 88788	3.4	33	8.3	35.8	2.5	36.9	39	475
Wilken Seed Grains Inc.	Wilken 3421NRR	3.2	PI 88788	3.6	33	6.9	33.5	2.3	33.3	43	800
	Trial Average	2.7	---	---	29	7.4	33.2	2.0	39.1	---	377
	LSD ³	---	---	---	---	1.8	3.3	0.6	4.4	---	938

Values presented in table are means. Entries are listed in order of maturity date, then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 11.

Location	Stanwood (EC Iowa)	Planting date	5/18/2003	Initial SCN (eggs/100cc soil)			550				
Herbicide treatment	Conventional	Harvest date	10/8/2003	SCN HG Type / Race			7 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Public	IA1008	1.8	PI 88788	2.0	19	4.8	38.8	2.8	47.5	12	275
Pioneer	9234	2.3	Peking	1.7	21	7.2	37.0	3.0	49.9	11	100
Latham Seed Company	Latham E2609T ²	2.6	CystX	2.5	21	5.7	36.0	3.0	43.9	13	700
<i>Latham Seed Company</i>	<i>Latham L-570 Brand</i>	<i>2.1</i>	<i>None</i>	<i>2.4</i>	<i>22</i>	<i>5.4</i>	<i>31.0</i>	<i>2.0</i>	<i>52.7</i>	<i>6</i>	<i>5,750</i>
<i>Pioneer</i>	<i>92B63</i>	<i>2.6</i>	<i>None</i>	<i>3.9</i>	<i>23</i>	<i>7.4</i>	<i>38.0</i>	<i>2.3</i>	<i>56.6</i>	<i>3</i>	<i>13,050</i>
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S25-J5</i>	<i>2.5</i>	<i>None</i>	<i>2.9</i>	<i>24</i>	<i>5.8</i>	<i>31.5</i>	<i>2.0</i>	<i>53.0</i>	<i>5</i>	<i>5,275</i>
Public	Loda	2.1	PI 88788	2.4	24	5.8	34.3	2.0	52.1	7	1,075
Public	Dwight	2.9	PI 88788	2.4	27	8.1	36.3	3.0	55.1	4	300
Public	Jack	2.9	PI 88788	2.8	28	5.7	47.5	3.5	51.1	9	750
UAP Midwest	DG3251N	2.5	PI 88788	1.9	29	6.9	34.5	2.0	51.0	10	225
KSC/Challenger	2990 SCN	2.9	PI 88788	3.0	30	7.6	35.8	2.0	57.4	2	400
<i>Stine Seed Company</i>	<i>Stine 2788</i>	<i>2.9</i>	<i>None</i>	<i>3.8</i>	<i>31</i>	<i>5.8</i>	<i>34.3</i>	<i>2.0</i>	<i>57.7</i>	<i>1</i>	<i>3,025</i>
Public	IA3005	3.6	PI 88788	3.4	32	6.3	37.0	4.0	51.4	8	413
	Trial Average	2.6	---	---	25	6.3	36.3	2.6	52.3	---	2,411
	LSD ³	---	---	---	---	NS	2.6	0.3	4.9	---	5,853

Values presented in table are means. Entries are listed in order of maturity date (from the C location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 12.

Location	Stanwood (EC Iowa)	Planting date	5/18/2003	Initial SCN (eggs/100cc soil)			260				
Herbicide treatment	Roundup®	Harvest date	10/8/2003	SCN HG Type / Race			7 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Dairyland Seed Co. Inc.	DST2132/RR ²	2.2	Peking	1.4	21	5.6	31.5	2.0	51.4	35	150
<i>Monsanto</i>	<i>DEKALB DKB23-51</i>	2.3	<i>None</i>	<i>3.0</i>	<i>21</i>	<i>6.6</i>	<i>37.8</i>	<i>2.3</i>	<i>51.2</i>	<i>36</i>	<i>6,500</i>
<i>Latham Seed Company</i>	<i>Latham L-647RR Brand</i>	<i>2.4</i>	<i>None</i>	<i>3.4</i>	<i>22</i>	<i>7.0</i>	<i>33.0</i>	<i>2.0</i>	<i>55.9</i>	<i>9</i>	<i>9,800</i>
UAP Midwest	DG32E26	2.6	PI 88788	3.4	26	7.2	37.8	2.0	46.4	45	350
Syngenta Seeds, Inc.	NK Brand X326R ²	2.6	PI 88788	3.4	27	7.1	39.8	3.3	54.8	14	200
Kruger Seed Company	255 RR/SCN	2.4	PI 88788 / PI 437654	3.0	27	7.8	41.5	3.0	54.8	14	525
<i>Pioneer</i>	<i>92B74</i>	<i>2.7</i>	<i>None</i>	<i>3.1</i>	<i>27</i>	<i>7.8</i>	<i>36.3</i>	<i>2.3</i>	<i>53.7</i>	<i>21</i>	<i>8,775</i>
Dennis Ewing Farm Seed	277 RR/SCN	2.7	PI 88788	3.5	27	7.0	35.5	2.5	52.4	28	350
Dairyland Seed Co. Inc.	DSR-255/RR	2.5	PI 88788	2.5	27	5.9	40.0	2.5	52.1	30	50
Merschman Seeds, Inc.	Merschman Mohawk RR	2.4	PI 437654	2.8	27	6.3	35.0	2.0	51.5	34	325
Thompson Seeds, Inc.	T-7246 CR	2.4	PI 88788	2.9	28	6.8	35.3	2.3	56.6	7	225
Prairie Brand Seed	PB-2606NRR	2.5	PI 88788	2.9	28	5.8	43.0	3.5	56.2	8	650
Kruger Seed Company	288 RR/SCN	2.8	PI 88788 / Peking	2.1	28	6.2	36.5	3.3	53.7	21	125
Ottilie RO Seed	Ottilie RO 8282 RRN	2.8	PI 88788	3.8	29	6.6	38.0	2.0	57.2	5	300
Merschman Seeds, Inc.	Merschman Chickasaw VIIIIR	2.9	PI 88788	1.9	29	7.6	38.5	2.8	54.9	13	125
Ottilie RO Seed	Ottilie RO 8266 RRN	2.6	PI 88788	3.5	29	5.8	37.8	2.0	52.7	27	225
Merschman Seeds, Inc.	Merschman Mohegan IVRR	2.6	PI 88788	3.0	29	6.6	40.5	2.5	51.9	33	175
KSC/Challenger	303 RR/SCN	2.9	PI 88788	3.0	30	7.9	34.8	2.3	55.3	11	300
Sand Seed Service, Inc.	SOI 2642NRR	2.6	PI 88788	3.2	30	6.3	39.5	3.8	54.2	17	525
UAP Midwest	DG35R27	2.7	PI 88788	2.8	30	8.3	38.8	2.8	54.2	17	375
Latham Seed Company	Latham L2878R Brand	2.8	PI 88788	2.9	30	6.7	41.3	3.3	53.1	24	88
Dennis Ewing Farm Seed	289 RR/SCN	2.8	PI 88788 / Peking	2.6	30	6.0	37.3	3.0	52.3	29	625
JC Robinson Seeds	H-2698 RR	2.6	PI 88788	2.3	30	6.5	37.8	2.8	50.1	39	150
Latham Seed Company	Latham E2709R ²	2.7	CystX	2.5	30	7.7	41.5	2.3	50.1	39	363
Four Star Seed Co.	3251RR	2.5	PI 88788	2.8	30	6.9	37.8	2.5	49.1	42	200
Midwest Seed Genetics	GR2931	2.9	PI 88788	3.6	31	7.9	36.0	2.0	58.8	3	625
JC Robinson Seeds	H-2991 RR	2.9	PI 88788	3.5	31	6.8	34.0	2.3	58.3	4	675
Garst Seed Company	Garst 3212RR/N	3.2	PI 88788	2.4	31	8.0	41.8	2.0	56.8	6	125
Stine Seed Company	Stine S2842-4	2.8	PI 88788	3.3	31	7.4	40.0	3.0	55.4	10	200
Crow's Hybrid Corn Co.	CRX292N-3 ²	2.9	PI 88788	2.5	31	5.8	41.0	2.8	54.3	16	275
Prairie Brand Seed	PB-2892NRR	2.8	PI 88788	2.9	31	8.2	40.3	3.0	54.1	19	375

Table 12 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Thompson Seeds, Inc.	T-7283 CR	2.8	PI 88788	2.8	31	7.2	38.5	2.8	53.8	20	325
Sand Seed Service, Inc.	SOI 2858NRR	2.8	PI 88788	3.3	31	7.1	37.8	2.8	53.1	24	350
Dennis Ewing Farm Seed	282 RR/SCN (prev 288+)	2.8	PI 88788 / Peking	2.4	31	6.2	37.0	3.0	53.0	26	650
Syngenta Seeds, Inc.	NK Brand S28-L9	2.8	PI 88788	3.0	31	8.0	53.5	4.3	52.0	31	613
Monsanto	ASGROW AG2801	2.8	PI 88788	3.8	31	5.1	36.3	2.0	47.1	43	125
Kruger Seed Company	299 RR/SCN	2.9	PI 88788	2.6	31	6.6	37.8	3.0	46.8	44	325
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S29-C9</i>	2.9	<i>None</i>	3.3	32	7.1	45.8	3.3	55.2	12	6,350
Garst Seed Company	Garst 2812RR/N	2.8	PI 88788	2.3	32	6.9	39.3	3.0	53.6	23	163
Prairie Brand Seed	PB-2983NRR	2.9	PI 88788 / PI 437654	2.9	32	7.4	41.5	2.5	52.0	31	400
Four Star Seed Co.	3282RR	2.8	PI 88788	3.3	32	6.8	39.3	3.0	49.9	41	375
Merschman Seeds, Inc.	Merschman Cherokee XRR	2.9	PI 88788	3.5	33	6.4	37.3	2.0	59.5	1	375
KSC/Challenger	339 RR	3.3	Not given	2.3	33	6.7	38.8	2.3	59.0	2	175
Wilken Seed Grains Inc.	Wilken 3421NRR	3.2	PI 88788	3.6	33	6.3	41.0	3.0	51.2	36	4,875
Monsanto	DEKALB DKB31-52	3.1	PI 88788	3.4	33	8.9	40.5	3.5	51.0	38	7,100
	Trial Average	2.7	---	---	29	6.9	38.7	2.7	53.4	---	1,243
	LSD ³	---	---	---	---	1.8	3.0	0.6	NS	---	4,394

Values presented in table are means. Entries are listed in order of maturity date (from the C location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 13.

Location	Lenox (SW Iowa)	Planting date	5/13/2003	Initial SCN (eggs/100cc soil)			3,752				
Herbicide treatment	Roundup®	Harvest date	10/10/2003	SCN HG Type / Race			0 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Monsanto	ASGROW AG2703	2.7	None	3.0	15	9.0	32.0	1.0	41.0	39	23,325
Latham Seed Company	Latham L-917RR Brand	2.8	None	2.3	16	7.8	30.3	1.8	38.8	45	24,050
Pioneer	93B09	3.0	None	1.6	17	7.6	30.3	1.3	40.7	40	19,550
Garst Seed Company	Garst 3212RR/N	3.2	PI 88788	2.4	18	9.0	35.8	1.5	45.3	26	800
UAP Midwest	DG3321NRR	3.2	PI 88788	2.5	18	8.6	36.0	1.5	44.9	27	1,075
Four Star Seed Co.	3282RR	2.8	PI 88788	3.3	19	8.5	32.8	2.0	47.8	16	1,225
Syngenta Seeds, Inc.	NK Brand X332R ²	3.3	PI 88788	2.4	19	8.1	33.3	1.8	47.6	17	1,725
Kruger Seed Company	299 RR/SCN	2.9	PI 88788	2.6	19	7.9	31.0	1.5	43.6	31	1,400
Syngenta Seeds, Inc.	NK Brand S34-U4	3.4	PI 88788	2.0	19	9.8	37.5	2.0	39.2	44	875
Otilie RO Seed	Otilie RO 8338 RRN	3.3	PI 88788	3.3	20	8.2	37.8	1.5	47.1	18	3,725
Merschman Seeds, Inc.	Merschman Coolidge IIIRR	3.2	PI 88788	1.8	20	7.7	32.8	1.8	46.3	20	1,425
Monsanto	ASGROW AG3202	3.2	PI 88788	2.4	22	7.9	35.8	1.8	52.3	1	767
Prairie Brand Seed	PB-3383NRR	3.3	PI 88788	2.6	22	8.4	33.0	1.5	51.0	2	1,700
JC Robinson Seeds	X33281 RR	3.2	PI 88788	3.7	22	10.1	30.8	1.3	47.1	18	2,125
UAP Midwest	DG32M32	3.2	PI 88788	3.3	22	7.7	35.3	1.5	42.7	34	12,800
Public	MPV 331NRR	3.3	PI 88788	2.8	23	8.5	35.5	2.0	49.3	7	1,200
Syngenta Seeds, Inc.	NK Brand S32-G5	3.2	None	2.8	23	8.8	32.3	1.8	39.4	42	15,100
Kruger Seed Company	355 RR/SCN	3.5	PI 88788	3.1	25	8.2	31.5	1.8	48.2	13	1,875
Prairie Brand Seed	PB-3683NRR	3.5	PI 88788	2.5	26	7.4	30.5	2.0	49.3	7	2,800
Merschman Seeds, Inc.	Merschman Grant IIIRR	3.5	PI 88788	2.4	26	7.7	31.5	1.8	48.1	15	2,550
JC Robinson Seeds	X33657 RR	3.6	PUSCN14	3.1	26	8.6	34.3	1.5	46.1	23	1,450
Public	MPV 350NRR	3.5	PI 88788	3.4	26	6.8	40.3	2.0	45.7	25	3,400
KSC/Challenger	395 RR/SCN	3.9	PI 88788	3.0	26	7.6	39.3	1.8	43.2	32	1,900
KSC/Challenger	399+ RR/SCN	3.9	PI 88788 / Peking	3.7	26	7.6	31.5	1.8	42.3	35	2,125
Public	MPV 381NRR	3.8	PI 88788	3.3	26	7.5	32.5	1.8	39.3	43	20,400
Garst Seed Company	Garst 3824RR/N	3.8	PI 88788	3.6	27	9.8	35.3	1.8	50.3	3	1,875
Monsanto	ASGROW AG3801	3.8	PI 88788	3.4	27	8.1	32.5	1.8	49.6	5	3,175
Monsanto	DEKALB DKB37-51	3.7	PI 88788	3.3	27	8.6	34.8	2.0	49.3	9	2,725
Midwest Seed Genetics	GR3732	3.7	PI 88788	2.9	27	7.6	34.0	2.0	48.2	13	4,575
Stine Seed Company	Stine S3532-4	3.5	PI 88788	3.0	27	7.6	30.5	2.0	46.3	20	2,625

Table 13 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Prairie Brand Seed	PB-3921NRR	3.8	PI 88788	3.6	27	8.6	36.8	2.0	46.2	22	1,250
Stine Seed Company	Stine S4032-4	4.0	PI 88788	3.4	27	7.5	33.5	1.8	43.9	29	1,700
Syngenta Seeds, Inc.	NK Brand S37-N4	3.7	PI 88788	3.5	27	7.1	37.5	1.8	41.5	38	750
Sand Seed Service, Inc.	SOI 3632NRR	3.6	PI 88788	3.4	28	8.2	31.3	1.8	44.1	28	26,225
UAP Midwest	DG3362NRR	3.6	PI 88788	3.5	28	6.8	29.8	1.5	39.6	41	29,425
Merschman Seeds, Inc.	Merschman Kennedy VIRR	3.8	PI 88788	3.5	29	7.2	30.8	1.8	41.7	37	29,550
Stine Seed Company	Stine S3832-4	3.8	PI 88788	3.1	30	8.3	34.3	2.0	49.2	10	2,875
KSC/Challenger	390 RR/SCN	3.9	PI 88788	3.3	30	6.9	38.3	2.0	46.0	24	1,275
Merschman Seeds, Inc.	Merschman Washington IXRR	3.8	PI 88788	2.8	31	7.5	33.5	2.0	49.5	6	5,350
Dennis Ewing Farm Seed	404 RR	4.0	Not given	3.0	31	7.5	29.5	1.8	42.3	35	16,575
Kruger Seed Company	393 RR/SCN	3.9	PI 88788	3.0	32	8.9	33.5	2.0	49.1	11	4,425
Merschman Seeds, Inc.	Merschman Cleveland VIIRR	3.9	PI 88788	3.3	32	9.5	31.3	2.0	42.9	33	17,575
Dennis Ewing Farm Seed	393+ RR/SCN	3.9	PI 88788	2.3	34	8.3	36.5	2.0	50.3	3	3,375
Dennis Ewing Farm Seed	388A RR/SCN	3.8	PI 88788	3.5	34	7.7	32.8	1.5	48.8	12	4,275
Merschman Seeds, Inc.	Merschman Roosevelt IIIRR	3.9	PI 88788	3.0	34	8.2	39.0	2.3	43.7	30	1,325
	Trial Average	3.5	---	---	25	8.1	33.7	1.8	45.5	---	7,210
	LSD ³	---	---	---	---	NS	2.5	0.6	4.5	---	9,120

Values presented in table are means. Entries are listed in order of maturity date (from the SE location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.

Table 14.

Location	Melrose (SC Iowa)	Planting date	5/23/2003	Initial SCN (eggs/100cc soil)			2,604				
Herbicide treatment	Roundup®	Harvest date	10/10/2003	SCN HG Type / Race			7 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Monsanto	ASGROW AG2703	2.7	None	3.0	15	6.8	29.3	1.5	32.1	44	11,525
Latham Seed Company	Latham L-917RR Brand	2.8	None	2.3	16	6.3	28.5	1.8	28.2	45	12,025
Pioneer	93B09	3.0	None	1.6	17	4.9	26.3	1.5	34.9	38	9,000
UAP Midwest	DG3321NRR	3.2	PI 88788	2.5	18	5.5	31.8	1.8	37.1	24	700
Garst Seed Company	Garst 3212RR/N	3.2	PI 88788	2.4	18	6.7	30.8	1.3	32.9	43	600
Four Star Seed Co.	3282RR	2.8	PI 88788	3.3	19	6.8	30.3	1.3	39.6	10	875
Syngenta Seeds, Inc.	NK Brand X332R ²	3.3	PI 88788	2.4	19	6.2	31.0	1.8	38.4	21	1,050
Syngenta Seeds, Inc.	NK Brand S34-U4	3.4	PI 88788	2.0	19	5.8	33.3	1.8	36.6	28	675
Kruger Seed Company	299 RR/SCN	2.9	PI 88788	2.6	19	6.6	27.8	1.5	35.9	31	875
Merschman Seeds, Inc.	Merschman Coolidge IIIRR	3.2	PI 88788	1.8	20	7.8	29.5	2.0	38.0	22	800
Otilie RO Seed	Otilie RO 8338 RRN	3.3	PI 88788	3.3	20	7.1	31.5	1.8	35.5	34	1,575
Prairie Brand Seed	PB-3383NRR	3.3	PI 88788	2.6	22	6.4	29.3	1.5	39.2	13	775
Monsanto	ASGROW AG3202	3.2	PI 88788	2.4	22	5.5	30.3	2.0	38.8	18	500
UAP Midwest	DG32M32	3.2	PI 88788	3.3	22	7.1	32.5	1.8	36.3	30	3,975
JC Robinson Seeds	X33281 RR	3.2	PI 88788	3.7	22	6.7	26.8	1.3	35.8	32	825
Public	MPV 331NRR	3.3	PI 88788	2.8	23	5.8	29.5	2.0	35.5	34	1,100
Syngenta Seeds, Inc.	NK Brand S32-G5	3.2	None	2.8	23	8.2	30.5	1.8	33.8	39	7,900
Kruger Seed Company	355 RR/SCN	3.5	PI 88788	3.1	25	5.9	29.5	2.0	33.7	40	2,275
KSC/Challenger	395 RR/SCN	3.9	PI 88788	3.0	26	5.6	36.5	1.8	40.3	8	1,200
Public	MPV 350NRR	3.5	PI 88788	3.4	26	6.9	35.5	2.0	39.0	16	875
Prairie Brand Seed	PB-3683NRR	3.5	PI 88788	2.5	26	5.8	29.0	1.8	38.8	18	1,675
Merschman Seeds, Inc.	Merschman Grant IIIRR	3.5	PI 88788	2.4	26	7.3	29.0	2.0	37.3	23	1,325
JC Robinson Seeds	X33657 RR	3.6	PUSCN14	3.1	26	6.8	29.8	1.0	36.7	27	500
KSC/Challenger	399+ RR/SCN	3.9	PI 88788 / Peking	3.7	26	6.4	30.0	1.8	35.2	37	550
Public	MPV 381NRR	3.8	PI 88788	3.3	26	6.9	31.0	1.8	33.3	42	6,200
Garst Seed Company	Garst 3824RR/N	3.8	PI 88788	3.6	27	6.2	30.3	1.3	42.2	1	1,025
Prairie Brand Seed	PB-3921NRR	3.8	PI 88788	3.6	27	7.1	30.3	1.8	41.7	2	1,375
Monsanto	ASGROW AG3801	3.8	PI 88788	3.4	27	6.0	28.0	1.5	40.6	4	1,150
Stine Seed Company	Stine S3532-4	3.5	PI 88788	3.0	27	7.1	30.5	2.0	40.4	5	1,425
Monsanto	DEKALB DKB37-51	3.7	PI 88788	3.3	27	7.3	29.3	1.8	39.4	12	2,300

Table 14 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Midwest Seed Genetics	GR3732	3.7	PI 88788	2.9	27	7.8	29.3	1.8	39.1	15	1,000
Syngenta Seeds, Inc.	NK Brand S37-N4	3.7	PI 88788	3.5	27	6.8	37.3	1.8	38.5	20	375
Stine Seed Company	Stine S4032-4	4.0	PI 88788	3.4	27	6.7	30.8	1.5	35.4	36	675
Sand Seed Service, Inc.	SOI 3632NRR	3.6	PI 88788	3.4	28	8.3	27.0	1.0	37.0	26	11,025
UAP Midwest	DG3362NRR	3.6	PI 88788	3.5	28	6.0	27.0	1.3	33.7	40	9,200
Merschman Seeds, Inc.	Merschman Kennedy VIRR	3.8	PI 88788	3.5	29	6.3	28.8	1.3	36.5	29	6,725
Stine Seed Company	Stine S3832-4	3.8	PI 88788	3.1	30	7.3	31.0	2.0	40.4	5	1,375
KSC/Challenger	390 RR/SCN	3.9	PI 88788	3.3	30	5.3	36.8	2.0	39.2	13	525
Merschman Seeds, Inc.	Merschman Washington IXRR	3.8	PI 88788	2.8	31	7.3	31.8	1.8	40.9	3	2,050
Dennis Ewing Farm Seed	404 RR	4.0	Not given	3.0	31	7.0	26.8	1.3	37.1	24	5,450
Kruger Seed Company	393 RR/SCN	3.9	PI 88788	3.0	32	6.0	32.0	1.8	39.5	11	1,238
Merschman Seeds, Inc.	Merschman Cleveland VIIRR	3.9	PI 88788	3.3	32	6.9	27.3	1.3	35.7	33	5,525
Dennis Ewing Farm Seed	393+ RR/SCN	3.9	PI 88788	2.3	34	6.8	31.3	1.5	40.4	5	2,175
Merschman Seeds, Inc.	Merschman Roosevelt IIIIRR	3.9	PI 88788	3.0	34	6.9	35.3	1.3	40.2	9	1,400
Dennis Ewing Farm Seed	388A RR/SCN	3.8	PI 88788	3.5	34	6.7	28.8	1.0	39.0	16	2,600
	Trial Average	3.5	---	---	25	6.6	30.4	1.6	37.3	---	2,844
	LSD ³	---	---	---	---	NS	2.1	0.6	3.9	---	3,773

Values presented in table are means. Entries are listed in order of maturity date (from the SE location), then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test ($P=0.05$), NS = no significant differences among the varieties.

Table 15.

Location	Crawfordsville (SE Iowa)	Planting date	5/19/2003	Initial SCN (eggs/100cc soil)			500				
Herbicide treatment	Roundup®	Harvest date	10/9/2003	SCN HG Type / Race			7 / 3				
Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
<i>Monsanto</i>	<i>ASGROW AG2703</i>	2.7	None	3.0	15	7.5	36.5	1.3	49.8	44	4,275
<i>Latham Seed Company</i>	<i>Latham L-917RR Brand</i>	2.8	None	2.3	16	6.4	35.3	1.0	47.3	45	3,350
<i>Pioneer</i>	<i>93B09</i>	3.0	None	1.6	17	6.1	32.5	1.0	56.0	31	1,850
UAP Midwest	DG3321NRR	3.2	PI 88788	2.5	18	7.7	39.3	1.0	55.7	32	325
Garst Seed Company	Garst 3212RR/N	3.2	PI 88788	2.4	18	8.8	41.8	1.3	54.8	36	175
Syngenta Seeds, Inc.	NK Brand X332R ²	3.3	PI 88788	2.4	19	7.2	37.3	1.0	61.1	9	1,125
Four Star Seed Co.	3282RR	2.8	PI 88788	3.3	19	7.1	37.3	1.0	56.7	29	438
Kruger Seed Company	299 RR/SCN	2.9	PI 88788	2.6	19	8.0	36.8	1.0	54.1	38	213
Syngenta Seeds, Inc.	NK Brand S34-U4	3.4	PI 88788	2.0	19	8.0	44.5	2.0	51.5	43	775
Ottolie RO Seed	Ottolie RO 8338 RRN	3.3	PI 88788	3.3	20	7.2	42.8	1.3	58.2	22	225
Merschman Seeds, Inc.	Merschman Coolidge IIIRR	3.2	PI 88788	1.8	20	7.5	36.8	1.0	55.6	33	63
Prairie Brand Seed	PB-3383NRR	3.3	PI 88788	2.6	22	7.8	38.5	1.3	62.0	4	225
Monsanto	ASGROW AG3202	3.2	PI 88788	2.4	22	6.7	41.3	1.0	57.5	24	200
UAP Midwest	DG32M32	3.2	PI 88788	3.3	22	8.7	42.3	1.5	56.4	30	1,925
JC Robinson Seeds	X33281 RR	3.2	PI 88788	3.7	22	6.7	34.0	1.0	54.7	37	150
<i>Syngenta Seeds, Inc.</i>	<i>NK Brand S32-G5</i>	3.2	None	2.8	23	5.9	39.8	1.3	57.3	25	2,625
Public	MPV 331NRR	3.3	PI 88788	2.8	23	6.9	36.3	1.0	57.1	26	450
Kruger Seed Company	355 RR/SCN	3.5	PI 88788	3.1	25	7.4	36.0	1.0	61.4	7	375
Prairie Brand Seed	PB-3683NRR	3.5	PI 88788	2.5	26	6.7	36.3	1.0	60.5	11	1,100
KSC/Challenger	395 RR/SCN	3.9	PI 88788	3.0	26	6.9	46.8	1.3	60.3	12	175
Public	MPV 350NRR	3.5	PI 88788	3.4	26	8.3	45.3	1.5	59.6	15	275
Merschman Seeds, Inc.	Merschman Grant IIIRR	3.5	PI 88788	2.4	26	6.4	35.3	1.0	59.4	19	263
Public	MPV 381NRR	3.8	PI 88788	3.3	26	6.3	39.3	1.0	54.9	35	4,750
JC Robinson Seeds	X33657 RR	3.6	PUSCN14	3.1	26	8.1	38.0	1.3	53.3	40	400
KSC/Challenger	399+ RR/SCN	3.9	PI 88788 / Peking	3.7	26	6.2	38.5	1.0	51.8	42	725
Monsanto	ASGROW AG3801	3.8	PI 88788	3.4	27	6.9	38.3	1.0	63.5	1	800
Garst Seed Company	Garst 3824RR/N	3.8	PI 88788	3.6	27	7.9	41.5	1.0	62.4	2	400
Midwest Seed Genetics	GR3732	3.7	PI 88788	2.9	27	7.7	41.8	2.0	62.1	3	425
Monsanto	DEKALB DKB37-51	3.7	PI 88788	3.3	27	7.4	39.8	1.3	61.3	8	800
Syngenta Seeds, Inc.	NK Brand S37-N4	3.7	PI 88788	3.5	27	7.4	45.5	2.0	59.8	13	775

Table 15 continued.

Brand	Variety	Relative maturity	Resistance source	IDC Rating (1-5)	Maturity date	Stand (plants/ft)	Height (inches)	Lodging (1-5)	Yield (bu/acre)	Yield rank	SCN # ⁽¹⁾ (100 cc)
Stine Seed Company	Stine S3532-4	3.5	PI 88788	3.0	27	6.0	34.8	1.0	59.6	15	750
Prairie Brand Seed	PB-3921NRR	3.8	PI 88788	3.6	27	6.2	40.3	1.3	57.9	23	500
Stine Seed Company	Stine S4032-4	4.0	PI 88788	3.4	27	6.7	39.0	1.0	53.5	39	775
Sand Seed Service, Inc.	SOI 3632NRR	3.6	PI 88788	3.4	28	7.4	37.0	1.0	59.5	17	1,850
UAP Midwest	DG3362NRR	3.6	PI 88788	3.5	28	7.0	34.8	1.0	58.6	21	6,225
Merschman Seeds, Inc.	Merschman Kennedy VIRR	3.8	PI 88788	3.5	29	6.9	36.3	1.0	55.2	34	6,075
Stine Seed Company	Stine S3832-4	3.8	PI 88788	3.1	30	7.3	39.3	2.0	59.8	13	350
KSC/Challenger	390 RR/SCN	3.9	PI 88788	3.3	30	5.7	48.0	1.5	53.1	41	2,875
Merschman Seeds, Inc.	Merschman Washington IXRR	3.8	PI 88788	2.8	31	6.8	39.0	1.3	61.9	6	400
Dennis Ewing Farm Seed	404 RR	4.0	Not given	3.0	31	7.3	36.3	1.5	56.8	28	2,350
Kruger Seed Company	393 RR/SCN	3.9	PI 88788	3.0	32	7.8	39.3	2.0	62.0	4	800
Merschman Seeds, Inc.	Merschman Cleveland VIIRR	3.9	PI 88788	3.3	32	7.9	36.3	1.0	59.4	19	3,950
Dennis Ewing Farm Seed	393+ RR/SCN	3.9	PI 88788	2.3	34	7.8	39.0	1.8	61.0	10	1,000
Dennis Ewing Farm Seed	388A RR/SCN	3.8	PI 88788	3.5	34	6.8	37.5	1.0	59.5	17	2,025
Merschman Seeds, Inc.	Merschman Roosevelt IIIIRR	3.9	PI 88788	3.0	34	7.1	44.8	1.8	57.1	26	350
	Trial Average	3.5	---	---	25	7.2	39.0	1.2	57.6	---	1,332
	LSD ³	---	---	---	---	NS	2.4	0.5	3.9	---	2,920

Values presented in table are means. Entries are listed in order of maturity, then by decreasing order of yield.

Italicized entries are widely grown susceptible varieties entered by Iowa State University for comparison purposes.

¹Final SCN egg population density (eggs per 100 cc soil); there were no significant differences among initial SCN population densities.

²Experimental variety.

³Least significant difference: values are from Fisher's least-significant-difference test (P=0.05), NS = no significant differences among the varieties.